



# Vaccines in Pregnancy

National Immunisation Office  
Lunch and Learn Webinar  
Thursday November 16<sup>th</sup> 2023





# Welcome and Introductions

# Agenda

- Introduction
- Recommendations on Vaccination
  - During Pregnancy
  - Before and After Pregnancy
- Vaccines and Pregnancy: This Choice Does Not Just Affect Me (Recording)
  - Professor Maeve Eogan, Rotunda Hospital
- Vaccine Preventable Diseases and Pregnancy (Recording)
  - Dr Geraldine Casey, HPSC
- Available resources for vaccinators
- FAQs to NIO from clinicians
- COVID19 Vaccines: Questions and Answers for Pregnant and Breast-feeding women
- Close

# Vaccines and Pregnancy

- The National Immunisation Advisory Committee (NIAC) provides the Immunisation Guidelines for Ireland based on the latest clinical and scientific information
- NIAC recommend some vaccinations during pregnancy to protect the health of the mother and their baby
- Live attenuated viral vaccines
  - **Contraindicated in pregnant women**
  - MMR, varicella, live attenuated influenza (nasal flu) vaccine
  - Theoretical risk of harm to foetus if vaccine virus should replicate
  - **Avoid pregnancy for 1 month after vaccination**
- Non live vaccines
  - Cannot replicate and cannot cause infection in either the mother or the foetus
  - No scientific evidence exists of foetal risks from vaccinating pregnant women with non live vaccines
  - Generally considered safe in pregnancy

# Vaccines and Pregnancy

- **Vaccines Recommended During Pregnancy**
  - Pertussis (Whooping Cough) in Tdap vaccine
  - Seasonal Influenza (Flu) vaccine
  - Covid19 vaccine
- **Vaccines Recommended Before Pregnancy**
  - MMR Vaccine (pregnancy must be avoided for one month following vaccination)
- **Vaccines Recommended After Pregnancy**
  - Tdap Vaccine (If not vaccinated during the pregnancy)
  - MMR Vaccine (pregnancy must be avoided for one month following vaccination)



# Vaccines Recommended During Pregnancy

# Vaccines and Pregnancy

- **Vaccines Recommended During Pregnancy**
  - Pertussis (Whooping Cough) in Tdap vaccine
  - Seasonal Influenza (Flu) vaccine
  - Covid19 vaccine



# Whooping Cough (Pertussis) Vaccine



# Whooping Cough (Pertussis)

- Pertussis or Whooping Cough is highly infectious
- Infants under the age of 6 months
  - Are most at risk of complications and hospitalisation
  - Too young to be fully vaccinated
- Pertussis in Hospitalised Infants
  - 50% have apnoea
  - 20% have pneumonia
  - 3% have seizures
  - 1-4% may die
- Pertussis vaccine (Tdap) is recommended for pregnant women
  - To protect the mother from infection
  - To provide protection to newborn infants through antibodies from their mother

# Whooping Cough (Pertussis)

- The National Immunisation Advisory Committee (NIAC) recommends that all pregnant women should be offered the Tdap vaccine
  - As early as possible **after 16 weeks and up to 36 weeks** gestation
  - In each pregnancy
- If a woman was not vaccinated during their pregnancy
  - Tdap should be offered in the week after delivery
  - To protect the mother from catching pertussis and passing it to the baby
- The Tdap vaccine is free during pregnancy
  - In November 2018, a national outbreak of Pertussis was declared
  - Your local Department of Public Health will be able to provide you with an outbreak code to claim for the administration of Tdap vaccine for pregnant women from 16 weeks in pregnancy
  - This means that the vaccine and its administration are free for all pregnant women



# Seasonal Influenza (Flu) Vaccine

# Seasonal Influenza (Flu)

- Pregnancy increases the risk of complications from Influenza
  - Because of alterations in heart rate, lung capacity, and immunological function
- Influenza in pregnancy is associated with
  - Miscarriage
  - Premature birth
  - Stillbirth
- Vaccination during pregnancy
  - Provides protection to the mother
  - Provides passive immunity to infants up to the first 6 months of life
- Infants under the age of 6 months
  - Are too young to receive the influenza vaccine
  - Have the highest rates of hospitalisation and death from influenza

# Seasonal Influenza (Flu)

- NIAC Recommend the flu vaccine for all pregnant adolescents and adults
  - At **any stage** of pregnancy
  - Every Flu Season
- Pregnant women are advised to have the QIV Flu vaccine
  - The QIV is an inactivated influenza vaccine
  - It is not a live vaccine and is considered safe in pregnancy



# COVID19 Vaccine

# COVID19 and Pregnancy

- Pregnant women are at similar risk of COVID-19 infection to non-pregnant women of the same age
- Pregnant women and adolescents with COVID-19 infection are at
  - Higher risk of severe illness compared with non-pregnant women
  - Especially in the third trimester
- Pregnant women who get COVID-19 are more likely than non-pregnant women
  - To be admitted to hospital
  - To require care in an intensive care unit (ICU)
  - To die from COVID-19
- In Ireland, between March 2020 and August 2021, of the pregnant women admitted to ICU with severe COVID-19 none had been vaccinated
- COVID-19 infection in the mother may result in preterm delivery

# COVID19 vaccines and Pregnancy

- mRNA COVID-19 vaccination is recommended during pregnancy, unless there is a contraindication
- **For Unvaccinated pregnant women:**
  - The primary COVID-19 vaccine schedule may be given **at any stage in pregnancy**
  - With an interval as recommended in Table 5a.1 of the immunisation guidelines
- **A COVID-19 booster vaccine is recommended once in pregnancy**
  - If a pregnant person has not had a previous COVID-19 booster, the first booster dose is recommended at least **4 months** after their last COVID-19 vaccine dose or SARS-CoV-2 infection
  - For pregnant women who have had a booster dose prior to pregnancy, they should receive a booster once in pregnancy at an interval of **6 months** or more since their last booster dose or SARS-CoV-2 infection.
- Booster doses can be given at any stage in pregnancy but ideally should be given **between 20-34 weeks**.
- If it is more than 12 months since their previous COVID-19 vaccine or infection administration earlier than 20 weeks in pregnancy should be considered
- For those who are pregnant and are immunocompromised, a second booster dose within the same pregnancy may be considered if 6 months has elapsed since their last booster dose or SARS-CoV-2 infection





# **Vaccines Recommended Before and After Pregnancy**

# Vaccines and Pregnancy

- **Vaccines Recommended Before Pregnancy**
  - MMR Vaccine (Pregnancy must be avoided for one month following vaccination)
- **Vaccines Recommended After Pregnancy**
  - Pertussis (Whooping Cough) in Tdap Vaccine
    - If not vaccinated with Tdap during the pregnancy
    - Tdap should be offered in the week after delivery
  - MMR Vaccine (Pregnancy must be avoided for one month following vaccination)



# MMR Vaccine

# HE MMR Vaccine

- Before getting pregnant, a woman should ensure that she is immune to infection from rubella (german measles)
- Rubella infection during pregnancy
  - May cause miscarriage or stillbirth
  - Up to Nine out of ten babies can have major birth defects such as deafness, blindness, brain damage or heart disease. This is known as Congenital Rubella Syndrome.
- The MMR vaccine provides immunity to infection from Rubella. The MMR vaccine given before pregnancy provides protection against rubella infection in any future pregnancies.
- Documentation of having received at least one dose of a rubella-containing vaccine
  - Is satisfactory evidence of protection against rubella
  - Irrespective of Serology
- MMR vaccination is only required if there is no documentation of the women having had at least one MMR vaccine in the past
- **The MMR is a live vaccine and pregnancy must be avoided for one month following vaccination.**



# Vaccines in Pregnancy-Prof Maeve Eogan



**Vaccine Preventable Diseases in Pregnancy-**  
**Dr Geraldine Casey**



# Vaccines in Pregnancy

## Communications



**Protect you and  
your baby this winter**

Flu, COVID-19 and whooping cough vaccines





# Autumn/Winter Vaccinations Campaign

- Launched in October 2023

## Key themes and target groups

- ‘Top-up’ your protection – COVID-19 booster and flu vaccines
- Nasal spray flu vaccine for children aged 2 to 12
- Pregnancy vaccines – flu, COVID-19 and whooping cough vaccines
- Pneumococcal vaccine for people aged 65 and over

## Channels and tactics

- TV, radio, Video-on-Demand (VOD), digital display, social media ads
- Pregnancy radio ad in [English](#) and [Irish](#)





# Social media assets and suggested posts

The vaccines recommended for you if you are pregnant give you and your baby important protection from serious illness. You can get your free flu vaccine at the same time as your free whooping cough or COVID vaccine. Make an appointment with your GP or pharmacist.

<https://bit.ly/45XLJZT>



If you are pregnant, it's time to boost your immunity so you and your baby are protected this winter. You can get your free flu vaccine at the same time as your COVID-19 booster or whooping cough vaccine. Make an appointment with your GP or pharmacist.

<https://bit.ly/45XLJZT>





# Social media assets and suggested posts

Má tá tú ag iompar clainne féadann tú do vacsaíní saor in aisce a fháil ó do DG nó ón gcógaslann. Tuilleadh eolais: <https://bit.ly/45XLJZT>



If you are pregnant, your flu, COVID-19 and whooping cough vaccines will help protect you and your baby. Book an appointment today or speak to your doctor or midwife.

<https://bit.ly/3ETerzS>



# Resources

## Campaign pack



**HSE**

Protect you and your baby this winter  
Flu, COVID-19 and whooping cough vaccines

**HSE** Health Service Executive

Protect you and your baby this winter – flu, COVID-19 and whooping cough vaccines  
NIO Campaign Pack

Autumn-Winter 2023

## HSeLanD



**HSE** Seolbhia Sláinte  
Níosa Fear  
& Forbairt Building a  
Better Health  
Service


Vaccinations and pregnancy **Start**

FAQs [www.immunisation.ie](http://www.immunisation.ie)

## Leaflets, posters

# Flu Vaccine

## Information for Pregnant Women





# **FAQ's to NIO from Healthcare Professionals about Vaccines in Pregnancy**

# Co-administration

- Tdap can be given at the same time as the flu and covid19 vaccines (or other inactive vaccine in pregnancy)
- However COVID-19 vaccines should be given in a separate limb
- There may be a slight increase in mild side effects when COVID-19 and flu vaccines are given at the same time
  - These include pain at the site of the injection, headache, muscle pain and tiredness
  - These side effects should only last a few days and can be relieved with paracetamol
- Don't delay either flu, COVID-19 or Tdap so they can be given together, give at recommended times



# Recent Tetanus containing vaccine

**Does a pregnant woman still need the Whooping cough (Tdap) vaccine if she has recently received a tetanus containing vaccine for a tetanus prone wound?**

- Yes, the Tdap vaccine is required between 16 and 36 weeks gestation because the tetanus containing vaccine used for tetanus prone wounds provides no protection against pertussis infection
- Tdap vaccine can be given at any time interval after any previous Tetanus-containing vaccine.
- The person may have a local reaction to the Tdap vaccine.

# Seasonal Influenza (Flu) Vaccine

**Should a woman who was pregnant at the end of the 2022-2023 seasonal influenza vaccination campaign, who received the flu vaccine then, and who has not yet delivered her baby receive the 2023-2024 influenza vaccine now?**

- Yes. NIAC recommend that a woman who was pregnant at the end of the 2022-23 campaign, who received influenza vaccine then, and who has not yet delivered her baby **should receive the 2023-2024 influenza vaccine now**
  - There is a new strain in this season's vaccine
  - Immunity from the first dose could have waned



# How many MMR vaccines is needed for life time immunity against rubella infection?

- If a patient has documented evidence of having received 1 dose of a rubella-containing vaccine, ***irrespective of rubella serology***, no further rubella (MMR) vaccine is necessary
- Two doses may be needed for protection against measles and mumps



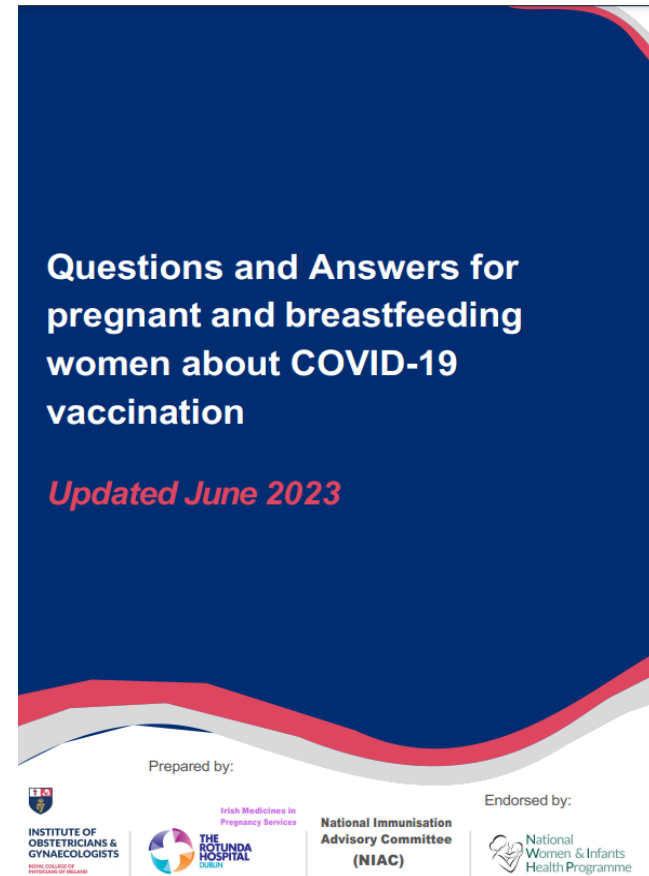


# Respiratory Syncytial Virus (RSV) Vaccination

- RSV normally causes mild, cold-like symptoms, but it can be serious particularly in young children and older adults.
- The Department of Health decides on immunisation policy in Ireland based on NIAC recommendations. No policy decision has been made regarding RSV vaccines by the Department of Health and therefore currently there is no national RSV immunisation programme in Ireland.
- For information on RSV, please visit [hse.ie](https://www.hse.ie)

# COVID19 vaccines and Pregnancy

- The National Immunisation Advisory Committee (NIAC) has produced a document of Questions and Answers for Pregnant and Breast-feeding women about COVID19 vaccination that is available on the RCPI website
- Addresses questions women may have about COVID-19 vaccination in relation to pregnancy, breast feeding, and fertility



# COVID19 vaccines and Pregnancy

## **What information is available about the safety of COVID-19 vaccines in pregnancy?**

- Continuing evidence regarding vaccination during pregnancy has demonstrated it to be safe and effective.
- Studies have found that COVID-19 vaccination is not associated with an increased risk of congenital malformations or birth defects, miscarriage, growth problems in the baby, preterm birth, stillbirths or admission to the neonatal intensive care unit.
- A number of studies from the UK, Israel and the US compared pregnancy outcomes among women who received a COVID-19 vaccine in pregnancy and women who did not receive a COVID-19 vaccine in pregnancy. None reported any increased risk of adverse pregnancy outcomes in women who received a COVID-19 vaccine. Some of these studies found evidence that vaccination reduces the risk of stillbirth and preterm birth.

# COVID19 vaccines and Pregnancy

## **Can a breastfeeding mother get a COVID-19 vaccine?**

- Yes. There is no evidence that COVID-19 vaccination while breastfeeding causes any harm to breastfed children or affects the ability to breastfeed.
- Studies looking for vaccine mRNA in breast milk have been unable to detect it or have only detected it at very low levels. If remnants of the vaccine get into breastmilk they get digested in the baby's stomach.
- A number of studies have shown that the protective antibodies the body makes get into breast milk at high concentrations and provide the baby with some protection against COVID-19 infection.

# COVID19 vaccines and Fertility

## Will the vaccine cause infertility or reduce the chances of getting pregnant?

- No. Studies have shown that COVID-19 vaccines do not reduce fertility.
- Studies have shown that COVID-19 vaccination does not affect ovarian function, egg quality, fertilisation or the number of women who became pregnant.
- COVID-19 vaccines do not affect male fertility. Three studies have shown that vaccination does not impact sperm quality or sperm count. Some studies have, however, found that COVID-19 infection may reduce sperm quality.
- The British Fertility Society (BFS) have a dedicated Q&A document on COVID-19 vaccines and fertility. This was published in July 2021. It is available here: <https://www.britishfertilitysociety.org.uk/2021/07/27/bfs-arcs-covid-19-vaccines-fertility-2/>

# Resources

- Visit [www.hse.ie/flu](http://www.hse.ie/flu) to download information leaflets, posters, videos, FAQs, algorithms and administration guides.
- Information for healthcare professionals is available on: <https://www.hse.ie/eng/health/immunisation/hcpinfo/>
- Email us (only for HCP enquiries): [immunisation@hse.ie](mailto:immunisation@hse.ie)
- National Immunisation Advisory Committee Immunisation Guidelines for Ireland Chapters 5a, 11, 15 and 20. Available to read from: <https://www.rcpi.ie/Healthcare-Leadership/NIAC/Immunisation-Guidelines-for-Ireland>
- National Immunisation Advisory Committee (NIAC) Questions and Answers for Pregnant and Breast-feeding women about COVID19 vaccination. Available at: <https://www.rcpi.ie/Healthcare-Leadership/NIAC/Hot-topics-and-resources/Hot-topics-and-general-resources>
- The Royal College of Obstetricians and Gynaecologists (RCOG) in the UK has provided FAQ's on COVID-19 vaccines, pregnancy and breastfeeding: <https://www.rcog.org.uk/guidance/coronavirus-covid-19-pregnancy-and-women-s-health/vaccination/covid-19-vaccines-pregnancy-and-breastfeeding-faqs/>
- Patient Information Leaflet and the Summary of Product Characteristics for each of the vaccines is available from [www.hpra.ie](http://www.hpra.ie)

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Q&A



**Close**

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